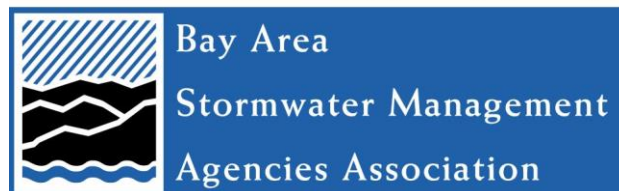


Annual Reporting for FY 2020-2021

Pesticide Toxicity Regulatory Modernization

San Francisco Bay Area Small MS4 Permit Implementation

B A S M A A



September 2021

INTRODUCTION

Introduction

This report provides information on regionally implemented activities complying with portions of the Small Municipal Separate Storm Sewer System (MS4) [Phase II Permit](#) issued by the State Water Resources Control Board (Water Board). The Phase II Permit covers stormwater discharges from 24 municipalities and special districts (Permittees) in the North San Francisco Bay Area. This report covers pesticide toxicity regulatory modernization activities implemented through the Bay Area Stormwater Management Agencies Association (BASMAA) related to the following Phase II Permit provisions:

- E.7.a.(ii)(i) – Develop and convey messages specific to proper application of pesticides, herbicides, and fertilizers
- E.11.h. – Permittee Operations and Maintenance Activities (O&M)
- E.11.j. – Landscape Design and Maintenance
- E.15.a. / Attachment G – Implement Pesticide-Related Toxicity Control Program

Effecting regulatory modernization occurs at the State and Federal level. Recognizing that fact, the Permittees have taken an approach to modernizing pesticide regulations that involves cooperating with BASMAA, the California Stormwater Quality Association (CASQA), and/or the Urban Pesticide Pollution Prevention Project (UP3 Project). All of these entities have determined this cooperative approach is not only the most likely approach but is likely the only approach for local agencies to effect meaningful change in the State and Federal regulatory environments.

Activities and Accomplishments during FY 2020-2021

The actual work of tracking and participating in the ongoing regulatory efforts related to pesticides was accomplished through CASQA. The Phase II and Phase I Permittees made contributions to CASQA through BASMAA. CASQA conducted its activities on behalf of its contributors and its members and coordinated funding contributions and activities through its Pesticides Subcommittee, a group of stormwater quality agencies affected by pesticides or pesticides-related toxicity listings, TMDLs, or permit requirements, as well as others knowledgeable about pesticide-related stormwater issues. The CASQA 2021 Pesticide Annual Report and Effectiveness Assessment (Attachment 1) provides a comprehensive and detailed accounting of efforts to track and participate in relevant regulatory processes as well as accomplishments related to pesticides and stormwater quality.

Attachments

Attachment 1

**2021 Pesticide Annual Report and Effectiveness Assessment
California Stormwater Quality Association
Final Report
August 2021**

2021 Pesticide Annual Report and Effectiveness Assessment

California Stormwater Quality Association



Final Report
August 2021

Preface

The California Stormwater Quality Association (CASQA) is comprised of stormwater quality management organizations and individuals, including cities, counties, federal agencies, state agencies, ports, universities and school districts, wastewater agencies, water suppliers, special districts, industries, and consulting firms throughout California. CASQA's membership provides stormwater quality management services to more than 26 million people in California. This report provides CASQA's members with focused information on its efforts to prevent pesticide pollution in urban waterways. It is a component of CASQA's True Source Control Initiative, which seeks to address stormwater and urban runoff pollutants at their sources. This report was funded by CASQA, Alameda Countywide Clean Water Program, Contra Costa Clean Water Program, Fairfield-Suisun Urban Runoff Management Program, Marin County Stormwater Pollution Prevention Program, Napa Countywide Stormwater Pollution Prevention Program, Sacramento Stormwater Quality Partnership, San Mateo Countywide Water Pollution Prevention Program, Santa Clara Valley Urban Runoff Pollution Prevention Program, Sonoma County Water Agency, and Vallejo Flood & Wastewater District.

This report was prepared by Stephanie Hughes under the direction of the CASQA True Source Control Subcommittee (Program Manager: Dave Tamayo), with input from Tammy Qualls of Qualls Environmental Consulting.

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Abbreviations Used in this Report

BACWA – Bay Area Clean Water Agencies

BE – Biological Evaluation

CASQA – California Stormwater Quality Association

CEQA – California Environmental Quality Act

CCRWQCB – Central Coast Regional Water Quality Control Board

CVRWQCB – Central Valley Regional Water Quality Control Board

CWA – Clean Water Act

DPR – California Department of Pesticide Regulation

EPA – United States Environmental Protection Agency

ESA – Endangered Species Act

FWS – U.S. Fish and Wildlife Service

FY – Fiscal Year (July 1 through June 30)

IPM – Integrated Pest Management

MAA – Management Agency Agreement between DPR and the Water Boards

MS4 – Municipal Separate Storm Sewer System

NACWA – National Association of Clean Water Agencies

NPDES – National Pollutant Discharge Elimination System

OPP – U.S. EPA Office of Pesticide Programs

OW – U.S. EPA Office of Water

PAH – Polycyclic aromatic hydrocarbon

PEAIP – Program Effectiveness Assessment and Improvement Plan

PMAC – Pest Management Advisory Committee

PPI – Pests, Pesticides, and Integrated Pest Management DPR initiative

PMP – Pesticides-specific Management Practice

SPCB – Structural Pest Control Board

SFBRWQCB – San Francisco Bay Regional Water Quality Control Board

STORMS – Strategy to Optimize Resource Management of Storm Water (a program of the State Water Board)

SWAMP – California Water Boards Surface Water Ambient Monitoring Program

SWRCB – State Water Resources Control Board or State Water Board

TMDL – Total Maximum Daily Load (regulatory plan for solving a water pollution problem)

TSC – CASQA True Source Control Subcommittee

UP3 – Urban Pesticides Pollution Prevention Partnership

UPA – Urban Pesticide Amendments

USGS – U.S. Geological Survey

Water Boards – California State Water Resources Control Board together with the California Regional Water Quality Control Boards

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Executive Summary

This report by the True Source Control (TSC) Subcommittee of the California Stormwater Quality Association (CASQA) describes CASQA's activities related to the goal of preventing pesticide pollution in urban waterways for the period of July 2020 through June 2021.

To address the problems caused by pesticides in California's urban waterways, CASQA collaborates with the California State Water Resources Control Board and the California Regional Water Quality Control Boards (Water Boards). By working with the Water Boards and other water quality organizations, we address the impacts of pesticides efficiently and proactively through the statutory authority of the California Department of Pesticide Regulation (DPR) and EPA's Office of Pesticide Programs (OPP). More than 17 years of collaboration with Urban Pesticides Pollution Prevention (UP3) Partnership, as well as EPA and DPR staff, has resulted in significant changes in pesticide regulation. A summary of CASQA's activities to address key management questions are described below, with more details and outcomes provided in Section 2.

Near term / Current problems – Are actions being taken by State and Federal pesticides regulators and stakeholders that are expected to end pesticide-caused toxicity or exceedances of pesticide water quality objectives in surface waters receiving urban runoff?

- 💧 CASQA shared its urban runoff expertise with pesticide regulators by preparing comment letters to EPA for six pesticide reviews, providing the Water Boards and other Partners with information that triggered additional letters on two more pesticide reviews. (See Tables 3, 4 and 5 and the Appendix.)
- 💧 CASQA provided feedback to EPA regarding the Fish and Wildlife Service (FWS) Biological Opinion for Malathion.
- 💧 In response to continued requests from CASQA and Partners, EPA continued following a precedent for improved label language for pool, spa, and fountain chemicals that was established by the decisions for lithium hypochlorite and copper.
- 💧 CASQA reviewed scientific literature in order to update and prioritize the Pesticide Watch List. The Watch List will be shared with pesticides regulators and with government agency and university scientists to stimulate generation of surface water monitoring and aquatic toxicity data for the highest priority pesticides. (See Table 2.)

Long term / Prevent future problems – Do pesticides regulators have an effective system in place to exercise their regulatory authorities to prevent pesticide toxicity in urban water bodies?

- 💧 DPR continues to demonstrate its commitment to addressing pesticide impacts on receiving waters through timely mitigation and implementation of improved evaluation procedures.
- 💧 The State Water Board continued to work toward development of the Urban Pesticide Amendments (UPA). The desired outcome for these amendments is to institutionalize the State's strategy of utilizing pesticide regulations as the primary mechanism for addressing pesticide water quality problems associated with urban runoff. This fiscal year, CASQA continued to directly support State Water Board staff's efforts to develop the UPAs. For example, CASQA organized a meeting of DPR, Water Board, and CASQA representatives on July 24, 2020. The goal of the meeting was for DPR to provide details to senior Water Board management on DPR's capacity and progress for addressing urban pesticide issues. The outcome was educational for all stakeholders, further advancing regulatory collaboration and solutions necessary for the UPAs.
- 💧 The State Water Board continued to work toward establishment of a coordinated monitoring program, which would be a new statewide urban runoff pesticides monitoring program to support the goals of the UPA. Such a program is intended to coordinate with existing Water Board and DPR urban pesticides and toxicity monitoring programs. The State Water Board is currently reconsidering the structure and function of the monitoring program. CASQA remains dedicated to supporting State Water staff.

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- Although many improvements have been made by OPP since the early 2000s, improvement in scientific evaluations supporting OPP's regulatory efforts and better understanding of urban runoff management systems are still necessary to adequately protect urban surface waters from pesticide impairments. In recent years, the regulatory climate of the federal administration limited progress by OPP in addressing these concerns. We will continue to work with OPP to further our goals.

In the coming year, CASQA plans to continue to address near-term pesticide concerns and seek long-term regulatory change. Future near-term and long-term tasks are identified in Section 3, Tables 5 and 6. Key topics include:

- Continued support of the eventual completion and adoption of the UPAs by the State Water Board;
- Continued development of a coordinated monitoring program in partnership with the Water Boards, DPR, and EPA Region 9;
- Registration review-related activities at EPA for pyrethroids and fipronil;
- DPR registration applications and proposed decisions for new products.

Section 1. Introduction

1.1 IMPORTANCE OF CASQA'S EFFORTS TO IMPROVE PESTICIDE REGULATION

For decades, the uses of certain pesticides in urban areas – even when applied in compliance with pesticide regulations – have adversely impacted urban water bodies. Currently used pesticides are the primary cause of toxicity in California surface waters, including urban water bodies.¹ Under the Clean Water Act (CWA), when pesticides impact water bodies, local agencies may be held responsible for exceedances in surface waters, as well as costly monitoring and mitigation efforts. To date, some California municipalities² have incurred substantial costs to comply with pesticides-related Total Maximum Daily Loads (TMDLs) and additional permit requirements. In some cases (e.g., diazinon, chlorpyrifos), municipal compliance costs have continued more than a decade after termination of virtually all urban use. In the future, more municipalities throughout the state are expected to be subject to similar requirements, as additional TMDLs and Basin Plan Amendments are adopted (Table 1). Meanwhile, local agencies have no authority to restrict or regulate when or how pesticides are used³ in order to proactively prevent pesticide pollution and avoid these costs and liabilities.

Under federal and state statutes, EPA and DPR have the authority and responsibility to regulate pesticides and protect water bodies from adverse effects (including impacts from pesticides in urban runoff). Unfortunately, until the relatively recent past, these agencies did not recognize the need, nor possess the institutional capacity, to exercise their authority to protect urban water quality. As a result, past registration actions have allowed a number of pesticides (such as pyrethroids and fipronil) to be used legally in ways that have resulted in widespread pollution in urban water bodies. This situation is depicted in Figure 1.

To change this situation, CASQA is actively engaged with state and federal regulators in an effort to develop an effective pesticide regulatory system, based primarily on existing statutes, that includes timely identification and mitigation of urban water quality impacts, and proactively prevents additional problems through the registration and registration review processes (Figure 2).

New Pesticide 303(d) Listings Proposed in 2021

In June 2021, the State Water Board released their 2020-2022 Integrated Report for which the Central Coast, Central Valley and San Diego Regions were scheduled for on-cycle 303(d) reviews. The report proposed numerous additional 303(d) pesticide listings for all three regions. While the most common listings were for pyrethroids, other proposed listings include imidacloprid, fipronil and diuron. Following a public comment period, the listings are expected to be adopted in January 2022 and submitted to the EPA in March 2022 ([State Water Board's 2020-2022 Integrated Report, June 4, 2021](#)).

¹ See reports from the California Surface Water Ambient Monitoring Program Sediment Pollution Trends Program including Anderson, B.S., Hunt, J.W., Markewicz, D., Larsen, K., 2011. Toxicity in California Waters, Surface Water Ambient Monitoring Program. California Water Resources Control Board. Sacramento, CA.

² For example, Sacramento-area municipalities spent more than \$75,000 in the 2008-2013 permit term on pyrethroid pesticide monitoring alone; Riverside-area municipalities spent \$617,000 from 2007 to 2013 on pyrethroid pesticide chemical and toxicity monitoring.

³ Local agencies in California have authority over their own use of pesticides but are pre-empted by state law from regulating pesticide use by consumers and businesses.

Table 1. California TMDLs, Statewide Water Quality Control Plans, and Basin Plan Amendments Addressing Currently Registered Pesticides and/or Toxicity in Urban Watersheds⁴

Water Board Region	Water Body	Pesticide	Status
Statewide	All MS4s/All Urban Waterways: Statewide Water Quality Control Plan amendments for urban pesticides reduction ["Urban Pesticides Amendments"] (Inland Surface Waters, Enclosed Bays & Estuaries, and Ocean)	All Pesticides/All pesticide-related toxicity	In preparation
	Sediment Quality Objectives (Enclosed Bays & Estuaries)	Sediment Toxicity ⁵	Approved
	Toxicity Provisions (Inland Surface Waters and Enclosed Bays & Estuaries)	Toxicity ⁵	In preparation
San Francisco Bay (2)	All Bay Area Urban Creeks	All Pesticide-Related Toxicity	Approved
Central Coast (3)	Santa Maria River Watershed Lower Salinas River Watershed	Pyrethroids, Toxicity Pyrethroids, Toxicity Malathion, Chlorpyrifos, Diazinon ⁶	Approved Approved In development
	San Lorenzo River Watershed (Santa Cruz)	Chlorpyrifos ⁶	Approved
Los Angeles (4)	Marina del Rey Harbor	Copper (Marine antifouling paint) ⁷	Approved
	Oxnard Drain 3 (Ventura County)	Bifenthrin, Toxicity	EPA-Adopted Technical TMDL
	Calleguas Creek, its Tributaries and Mugu Lagoon	Water & Sediment Toxicity ⁵ Diazinon & Chlorpyrifos ⁶	Approved
	McGrath Lake (Ventura County)	Sediment Toxicity ⁵	Approved
	Colorado Lagoon (Long Beach)	Sediment Toxicity ⁵	Approved
	Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters Ballona Creek Estuary	Sediment Toxicity ⁵	Approved Approved

⁴ Excludes pesticides that are not currently registered in California, such as organochlorine pesticides.

⁵ These TMDLs/Plan provisions can trigger toxicity testing stressor source identification studies, and additional follow up, even when toxicity is linked to current pesticides.

⁶ Use prohibited in urban areas (diazinon) or no meaningful use due to use limitations (chlorpyrifos).

⁷ Primarily addresses pesticides that are directly discharged and should not ordinarily appear in stormwater (marine antifouling paint).

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Water Board Region	Water Body	Pesticide	Status
Central Valley (5)	Sacramento River and San Joaquin River Basins	Pyrethroids	Approved
	Sacramento-San Joaquin River Delta Waterways	Diazinon & Chlorpyrifos ⁶	Approved
	Sacramento & Feather Rivers	Diazinon & Chlorpyrifos ⁶	Approved
	Sacramento County Urban Creeks	Diazinon & Chlorpyrifos ⁶	Approved
	Lower San Joaquin River	Diazinon & Chlorpyrifos ⁶	Approved
Lahontan (6)	Pesticide Discharge Prohibition	All Pesticides	Approved
Santa Ana (8)	Newport Bay	Copper (Marine antifouling paint) ⁷	In preparation
	San Diego Creek, and Upper and Lower Newport Bay	Toxicity (Diazinon & Chlorpyrifos) ⁶	EPA-Adopted Technical TMDL
San Diego (9)	Shelter Island Yacht Basin (San Diego Bay)	Copper (Marine antifouling paint) ⁷	Approved
	Chollas Creek	Diazinon ⁶	Approved

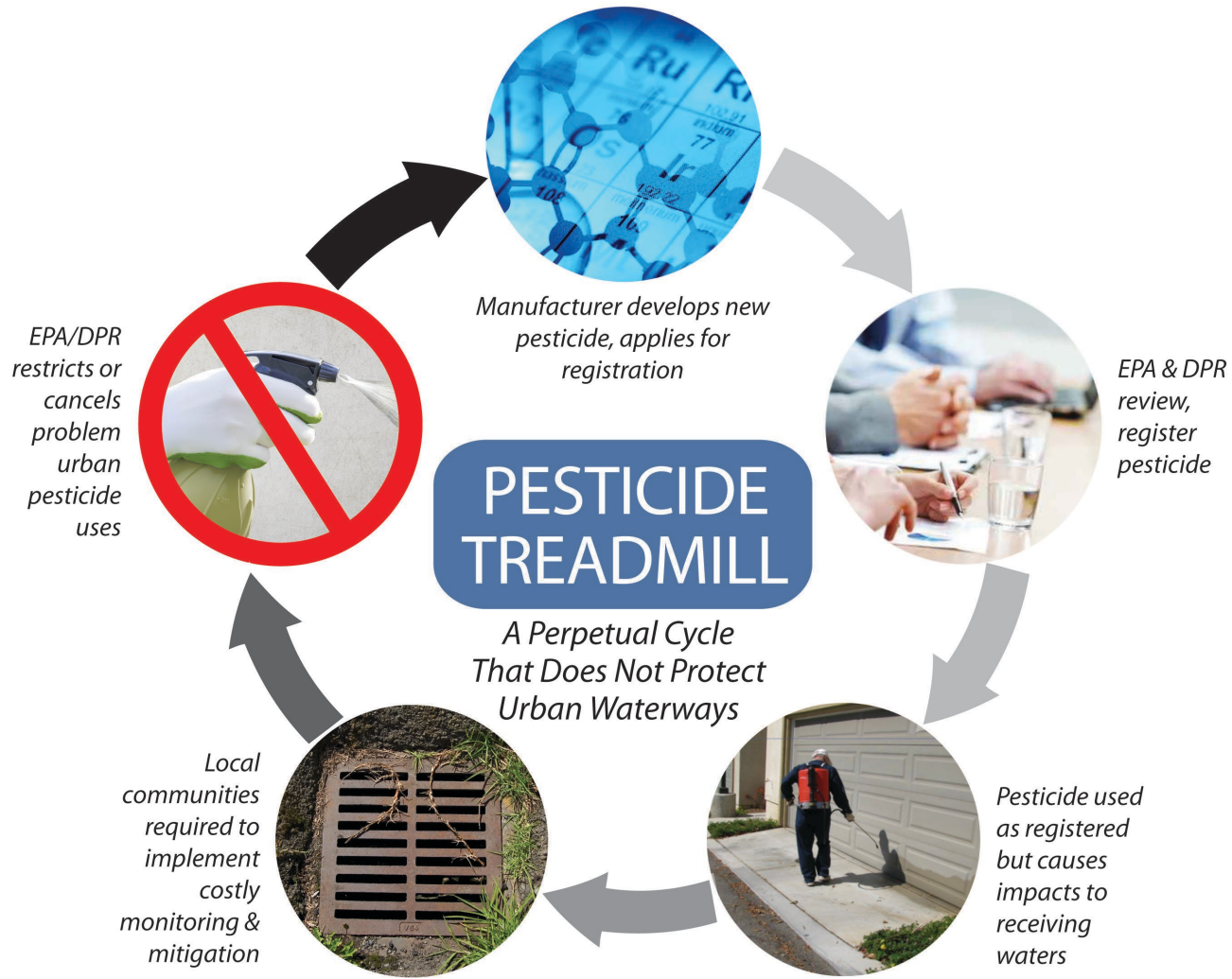


Figure 1. Current Pesticide Regulatory System.⁸

⁸ Photos in Figures 1 and 2 of spraying pesticide along a garage was taken by Les Greenberg, UC Riverside



Figure 2. Proactive Use of the Pesticide Regulatory Structure to Restrict Pesticide Uses that have the Potential to Cause Urban Water Quality Problems.

1.2 CASQA'S GOALS AND APPLICATION TO PROGRAM EFFECTIVENESS ASSESSMENT

CASQA's *Vision for Stormwater*, first approved by the Board of Directors in 2015, is periodically updated to reflect developments in stormwater management. In October 2020, CASQA released the updated *Vision for Sustainable Stormwater Management*.⁹ Within CASQA's Vision, Action 1.2 is to "Minimize Pollution Through True Source Control." Among the objectives described within Action 1.2, Objective 2 has the following scope:

Objective 2: Implement an Urban Pesticide Program

For decades now, the uses of certain pesticides in urban areas – even when applied in compliance with pesticide regulations – have adversely impacted urban water bodies. Currently used pesticides are the primary cause of toxicity in California surface waters, including urban water bodies. CASQA is actively engaged with state and federal regulators in an effort to develop an effective pesticide regulatory system, based primarily on existing statutes, that includes timely identification and mitigation of urban water quality impacts, and proactively prevents additional problems through the registration and registration review processes.

Potential Collaborators: State Water Board, DTSC, EPA, DPR

The effectiveness of CASQA's efforts toward this scope can be expressed in relation to management questions established as part of Municipal Separate Storm Sewer Systems' (MS4s') program effectiveness assessments that are required in some MS4 permits. With respect to addressing urban pesticide impacts on water quality, the following two management questions are suggested for inclusion in MS4s' program effectiveness assessment:

Question 1: (Near term / Current problems) – Are actions being taken by State and Federal pesticides regulators and stakeholders that are expected to end recently observed pesticide-caused toxicity or exceedances of pesticide water quality objectives in surface waters receiving urban runoff?

Question 2: (Long term / Prevent future problems) – Do pesticides regulators have an effective system in place to exercise their regulatory authorities to prevent pesticide toxicity in urban water bodies?

This report is organized to answer these management questions and is intended to serve as an annual compliance submittal for both Phase I and Phase II MS4s. It describes the year's status and progress, provides detail on stakeholder actions (by CASQA and others); and provides a roadmap / timeline showing the context of prior actions as well as anticipated end goal of these activities. This report may also be used as an element of future effectiveness assessment annual reporting.

⁹ https://www.casqa.org/sites/default/files/downloads/final_-_vision_for_sustainable_stormwater_management_-_10-07-2020.pdf

Section 2. Latest Results of CASQA Efforts

At any given time, there are dozens of pesticides with current or pending actions from the EPA or DPR. Addressing near term regulatory concerns is important because some pesticides may pose immediate threat to water quality that can lead to compliance liability for MS4s, and because some of the regulatory decisions made by EPA and DPR will last many years. For example, pesticide registration decisions are intended to be revisited on a fifteen-year cycle. To inform its engagement on near-term regulatory concerns, CASQA uses the Pesticide Watch List in the prioritization of near-term efforts (Section 2.1).

Meanwhile, CASQA and BACWA continue to work on parallel efforts to effect long-term systemic changes in the regulatory process itself (see inset). By identifying inadequacies and inefficiencies in the pesticide regulatory process, and persistently working with EPA and DPR to improve the overall system of regulating pesticides, CASQA and BACWA are gradually achieving results (Section 2.2).

2.1 NEAR-TERM REGULATORY CONCERNS

CASQA seeks to ensure that the Water Boards and EPA's Office of Water (OW) work with DPR and EPA's OPP to manage problem pesticides that are creating near-term water quality impairments. These efforts address CASQA Vision Action 1.2 as well as Phase II MS4 Program Effectiveness Assessment and Improvement Plan (PEAIP) Management Question 1 regarding observed pesticide-caused toxicity or exceedances of pesticide water quality objectives in surface waters receiving urban runoff.

Assessment Question 1: (Near term / Current problems) – Are actions being taken by State and Federal pesticides regulators and stakeholders that are expected to end recently observed pesticide-caused toxicity or exceedances of pesticide water quality objectives in surface waters receiving urban runoff?

Answer: As detailed below, at the State level, significant progress has been made by DPR in addressing near-term and current problems with pesticides in surface waters receiving urban runoff. DPR continues to implement improved registration processes and responses to observed water quality problems. DPR also continues to implement and evaluate mitigation measures for observed problems with pyrethroids and fipronil.

At the Federal level, less progress has been made at addressing near term problems. Some early actions were taken to address pyrethroid and fipronil problems at the urging of CASQA and DPR. However, EPA does not show a clear understanding of key urban uses in its analyses, and it is still unclear if its upcoming risk management decisions for pyrethroids, fipronil, and imidacloprid and other neonicotinoids will provide any additional protection of urban water bodies.

2.1.1 Updated Pesticide Watch List

A key tool for identifying near-term regulatory concerns is CASQA's Pesticide Watch List. As time permits, CASQA reviews scientific literature, government reports, and monitoring studies as they are published. This information is used to prioritize pesticides based on the most up-to-date understanding of urban uses, pesticide characteristics, monitoring, and surface water quality toxicity (for pesticides and their degradates). CASQA uses these insights to update the list each

CASQA Cost-Sharing with BACWA to Track EPA and DPR Pesticide Regulatory Actions



There has been a long history of collaboration between CASQA, the Bay Area Clean Water Agencies (BACWA), and the State Water Board, as all entities seek to track and respond to pesticide regulatory actions, with the goal of avoiding pesticide-related toxicity.

For instance, CASQA and BACWA regularly track pesticide regulatory activities by EPA, DPR and other agencies that have significant potential to affect surface water quality. Over the years, the funding for these tracking tasks has shifted back and forth between the State Water Board (the original funding source), with CASQA and BACWA most recently funding separate, but similar efforts. In 2021, CASQA and BACWA combined resources to track stormwater and wastewater priorities into a single Action Plan.

Both CASQA and BACWA are committed to continued collaborations to streamline our proactive regulatory approach.

year (Table 2), which serves as a management tool to help focus efforts on the most important pesticides from the perspective of MS4 agencies.¹⁰ There are 2 additions in the 2021 Pesticide Watch List – naled and antimicrobials in paints and coatings. Naled, registered for mosquito abatements, degrades to dichlorvos (DDVP) post-application and remains at levels toxic to aquatic organisms. There are a number of antimicrobial pesticides under review by EPA for uses in outdoor paints and coatings, the leaching of which can lead to water quality impacts; CASQA anticipates many more such pesticides in the coming months.

2.1.2 Description of Near-Term Regulatory Processes

Immediate pesticide concerns may arise from regulatory processes undertaken at DPR or EPA's OPP. For example, when EPA receives an application to register a new pesticide, there may be two opportunities for public comment that are noticed in the Federal Register, as depicted in green in Figure 3. EPA's process usually takes less than a year while DPR typically evaluates new pesticides or major new uses of active ingredients within 120 days. Now that DPR implements relatively robust surface water quality review procedures for new pesticide registrations, there is reduced need for CASQA to provide input to EPA on new pesticides.

Table 2. Current Pesticide Watch List (July 2021)

Priority	Basis for Priority Assignment	Pesticides		
1	Monitoring data exceeding benchmarks; linked to toxicity in surface waters; urban 303(d) listings	Pyrethroids (20 chemicals ¹¹)	Fipronil	Imidacloprid (neonic) Malathion
2	Monitoring data approaching benchmarks; modeling predicts benchmark exceedances; very high toxicity and broadcast application on impervious surfaces; urban 303(d) listing for pesticide, degradate, or contaminant that also has non-pesticide sources	Carbendazim (Thiophanate methyl) ¹² Chlorantraniliprole Copper pesticides *	Creosote (PAHs) Indoxacarb Neonics (other than Imidacloprid) ¹³ Pendimethalin	Pesticides with dioxins impurity ¹⁴ PHMB + Zinc pesticides (including Ziram) +
3	Pesticide contains a Clean Water Act Priority Pollutant; 303(d) listing for pesticide, degradate, or contaminant in watershed that is not exclusively urban	Arsenic pesticides Chromium pesticides	Diuron Naphthenates	Simazine Silver pesticides + Trifluralin

¹⁰ The first Watch List was published by the UP3 in 2005.

¹¹ Allethrin, Bifenthrin, Cyfluthrin, Cyhalothrin, Cypermethrin, Cyphenothrin, Deltamethrin, Esfenvalerate, Etofenprox, Flumethrin, Imiprothrin, Metofluthrin, Momfluothrin, Permethrin, Prallethrin, Resmethrin, Sumethrin [d-Phenothrin], Tau-Fluvalinate, Tetramethrin, Tralomethrin.

¹² Carbendazim is a registered pesticide, and also a degradate of thiophanate-methyl

¹³ Acetamiprid, Clothianidin, Dinotefuran, Thiamethoxam (degrades into Clothianidin)

¹⁴ 2,4,-D, Chlorothalonil, Dacthal, Pentachlorophenol

* Used in pools, spas, and/or fountains

Priority	Basis for Priority Assignment	Pesticides		
4	High or unknown toxicity (parent or degradate) and urban use pattern associated with water pollution; synergist for higher tier pesticide; on DPR priority list	Abamectin ADBAC pesticides ¹⁵ + Antimicrobials in paints/coatings Azoxystrobin Bacillus sphaericus + Bacillus thuringiensis + Bromacil N-Bromosulfamates Busan-77 + Carbaryl Chlorinated isocyanurates + Chlorine + Chlorine dioxide + Chlorfenapyr Chlorsulfuron DCOIT + DDAC + Dichlobenil	Dichlorvos (DDVP) Dithiopyr Halohydrantoin + Hydramethylnon Hypochlorites + Imazapyr Isoxaben Mancozeb Methomyl Methoprene + Methyl anthranilate + Mineral bases, weak + Mineral oil (aliphatic) + MGK-264 Naled Novaluron Oryzalin Oxadiazon Oxyfluorfen	PCNB Peroxyacetic acid + Phenoxy herbicides ¹⁶ Piperonyl butoxide (PBO) Prodiamine Propiconazole Pyrethrins Pyriproxyfen + Sodium bromide + Sodium chlorite + Sodium percarbonate + Sodium tetraborate + Spinosad + / Spinetoram Sulfometuron-methyl Tebuconazole Terbutylazine + Triclopyr Triclosan Trimethoxysilyl quats
5	Frequent questions from Partners	Chloropyrifos (near zero urban use)	Diazinon (no urban use) Glyphosate	Metaldehyde
New	Priority determined on the basis of proposed urban use, aquatic toxicity, and other information in registration application.	Not known but may include the following:	Cyantraniliprole Cyclaniliprole Flupyradifurone	Nitenpyram (Neonic) Nithiazine (Neonic) Sulfoxaflor (Neonic)
None	Based on review of available data, no approved urban use or no tracking trigger as yet identified.	Most of the >1,000 existing pesticides		
Unknown	Lack of information. No systematic screening has been completed for the complete suite of urban pesticides.	Unknown		

¹⁵ Alkyl Dimethyl Benzyl Ammonium Chlorides (ADBAC) includes a family of 21 different quaternary ammonium pesticides.

¹⁶ MCPA and salts, 2,4-D, 2,4-DP, MCPP, dicamba

Figure 3. EPA’s Registration Process for New Pesticides



Another regulatory process, “Registration Review,” depicted in Figure 4, is meant to evaluate currently registered pesticides about every 15 years, to account for new data available since initial registration. In general, it takes EPA five to eight years to complete the entire process. In addition to this process, pesticides are typically evaluated based on Endangered Species Act criteria. EPA regularly updates its schedule for approximately 50 pesticides that will begin the review process in a given year.¹⁷

Figure 4. EPA’s Registration Review – Process to Review Registered Pesticides at a Minimum of Every 15 Years.



DPR also has an ongoing, but informal review process (called continuous evaluation) that can address pesticides water pollution. If it needs to obtain data from manufacturers, DPR can initiate a formal action, called “Reevaluation.” These evaluations, mitigation measure development, and mitigation effectiveness evaluation have involved ongoing communication with CASQA and partners.

While EPA must consider water quality in all of its pesticide registration decisions, at DPR this step is not yet fully established as standard (most outdoor urban pesticide registration applications are routinely routed by DPR for surface water review, but a few – notably antimicrobial products used in storm drains – do not automatically receive this review). CASQA monitors registration applications, to identify those relevant to urban runoff, based on the Pesticide Watch List in Table 2 and use pattern/toxicity analysis for pesticides that have not previously been reviewed.

2.1.3 Key Near-Term Regulatory Activities and Progress

Table 3 presents a summary of recent CASQA and partner activities to address near-term regulatory concerns and the latest results; for additional insight regarding on-going pesticide registrations, see the Appendix. CASQA monitors the Federal Register and DPR’s website for notices of regulatory actions related to new pesticide registrations and registration reviews. Since the Pesticide Watch List is not based on a comprehensive review of all pesticides, CASQA watches for additional pesticides that appear to have any of the following characteristics: proposed urban, outdoor uses with direct pathways for discharge to storm drains, high aquatic toxicity, or containing a priority pollutant. Participating in these regulatory processes can take many years to complete.

In addition, EPA’s OPP strives to update their Aquatic Life Benchmarks table on an annual basis.¹⁸ In September 2020, EPA’s Office of Pesticide Programs, Environmental Fate and Effects Division updated its pesticides Aquatic Life Benchmarks table.¹⁸ These updates included benchmarks for 5 newly registered pesticides (and their degradates) and 9 previously registered pesticides (and their degradates) undergoing registration review. While none of those 14 pesticides

¹⁷ See <https://www.epa.gov/pesticide-reevaluation/registration-review-schedules> for schedule information.

¹⁸ <https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/aquatic-life-benchmarks-and-ecological-risk>

are on CASQA’s Pesticide Watch List, pesticides still awaiting benchmark updates include the many pyrethroids (other than new transfluthrin, which is not yet registered in California) and fipronil and its degradates. These pesticides are currently in EPA’s Registration Review process.

Table 3. Latest Results of Efforts Communicating Near-Term Regulatory Concerns to EPA¹⁹

Regulatory Action or Concern	CASQA Efforts			Partner Support (Letters)	Outcomes and notes
	Letter(s)	Call(s) or emails	Mtg(s)		
Pyrethroids Ecological Risk Mitigation Proposal for 23 Chemicals	✓		✓	BACWA SFBRWQCB NACWA City of Salinas	CASQA continued to recommend that EPA’s risk / benefit finding be revised to differentiate among the 23 pyrethroids and pyrethrins due to very different toxicity endpoints and outdoor urban uses of the 23 chemicals. EPA declined.
Bifenthrin Proposed Interim Decision	✓			SFBRWQCB BACWA NACWA	CASQA concluded that special measures to address bifenthrin are an important part of a pyrethroids mitigation strategy because, from the urban water quality standpoint, bifenthrin is far more problematic than other pyrethroid pesticides. CASQA continues to request that EPA terminate urban outdoor use of bifenthrin. EPA response: “EPA has considered these comments and has decided not to develop unique chemical-specific risk mitigation for bifenthrin at this time beyond what is already required as part of this ID.”
Cypermethrin Proposed Interim Decision	✓			BACWA SFBRWQCB	Pending. In the PID, EPA concluded that outdoor / urban uses present substantial risks to freshwater and estuarine/marine fish and invertebrates. On that basis, CASQA sought enhancements to the proposed label language to include a graphic to prevent spilling or dumping into storm drains, be clear and consistent regarding impervious and vertical surfaces, and provide California-specific labels for outdoor structural pest control.
Cyhalothrins Proposed Interim Decision	✓				Pending. In the PID, EPA concluded that outdoor / urban uses present substantial risks to freshwater and estuarine/marine fish and invertebrates. On that basis, CASQA sought enhancements to the proposed label language to include a graphic to prevent spilling or dumping into storm drains, be clear and consistent regarding impervious and vertical surfaces, and provide California-specific labels for outdoor structural pest control.

¹⁹ Color coding in this table is meant to reflect the Pesticide Watch List prioritization color coding in Table 2.

Regulatory Action or Concern	CASQA Efforts			Partner Support (Letters)	Outcomes and notes
	Letter(s)	Call(s) or emails	Mtg(s)		
Malathion Fish and Wildlife Service (FWS) Biological Opinion	✓				Pending. The FWS Biological Opinion concluded that products containing malathion can result in serious impacts on endangered and threatened species and their habitats, including in urban surface waters. On that basis, CASQA has asked EPA to (1) identify mitigation measures to adequately protect affected listed species and habitats, and (2) to complete an updated ecological risk assessment as part of registration review, to identify potential impacts more broadly on other ecologically important species.
Thiophanate methyl/ Carbendazim Ecological Risk Assessment				Sacramento County	Pending. Asked that EPA perform surface water modeling for urban runoff, and quantitatively assess risks to surface water aquatic life for carbendazim products that are used outdoors for protection of building materials. In addition, the acute freshwater vertebrate toxicity endpoint used in the ERA conducted by the Antimicrobials Division differed from the acute endpoint used in the ERA conducted by EPA's Environmental Fate and Effects Division leading to a significant difference in the minimum surface area expected to lead to a toxicity endpoint.
Ziram Ecological Risk Assessment	✓				Pending. For freshwater invertebrates, EPA cited several reasons why the calculated risks were likely to be overestimates leading to a conclusion that appeared to be speculative and arbitrary, the results of which may not be sufficiently protective of aquatic life. Therefore, CASQA asked that EPA modify its risk assessment analysis for freshwater invertebrates. In addition, CASQA requested that the risk assessment be amended to include consideration of the results of a sediment toxicity study for freshwater invertebrates.
Creosote Interim Registration Review Decision	✓				Pending. EPA's Decision was made without the benefit of an Ecological Risk Assessment. This was due to a lack of data despite multiple data requests by EPA to the registrants (dating back to 2011). Therefore, CASQA asked that an Ecological Risk Assessment be completed before publishing a registration review decision. CASQA further requested that EPA seek monitoring data given that PAHs found in creosote are commonly detected in urban runoff and receiving waters.

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Regulatory Action or Concern	CASQA Efforts			Partner Support (Letters)	Outcomes and notes
	Letter(s)	Call(s) or emails	Mtg(s)		
Diuron Ecological Risk Assessment and Antimicrobial Use Risk Assessment	✓				Pending. EPA modeling results indicate a clear need for mitigation to protect aquatic life from legal uses of diuron within urban areas. CASQA requested that the risk assessment be amended to include consideration of the results of a sediment toxicity study for freshwater invertebrates. CASQA is also seeking consistency in toxicity endpoints within EPA documentation.
Chlorine gas/swimming pools Draft Risk Assessment	✓			SFBRWQCB BACWA NACWA	Success! CASQA recommended that the label language be updated to match the language for copper products, which would also provide consistent label language across pool, spa, and hot tub chemicals. EPA adopted the following language for all products used to treat commercial and residential pools and fountains: <i>“Before draining a treated [pool] or [fountain], contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated [pool] or [fountain] water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities.”</i>
Halohydrantoin/pools, fountains, spas – Draft Risk Assessment	✓			BACWA SFBRWQCB NACWA	Partial Success. CASQA recommended that the label language be updated to match the language for copper products, which would also provide consistent label language across pool, spa, and hot tub chemicals. EPA adopted the following language: <i>“Before draining a treated [pool], [spa], [hot tub], or [fountain], contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated [pool], [spa], [hot tub], or [fountain] water to any location that flows to a gutter or storm drain or natural water body unless discharge is allowed by state and local authorities.”</i> CASQA also recommended that the “Environmental Hazards” label statements be applied on the basis of product end use rather than product size. This would mimic EPA’s decision for lithium hypochlorite and copper products. This suggestion was ignored.

2.2 LONG-TERM CHANGE IN THE PESTICIDES REGULATORY STRUCTURE

Since the mid-1990s, CASQA (and its predecessor organization the Storm Water Quality Task Force), have worked toward a future in which the pesticide regulatory structure at the state and federal level proactively restricts pesticide uses that have the potential to cause urban water quality problems. These efforts directly relate to Phase II MS4 PEAIP Management Question 2.

Assessment Question 2. (Long term / Prevent future problems) – Do pesticides regulators have an effective system in place to exercise their regulatory authorities to prevent pesticide toxicity in urban water bodies?

Answer: Improvements in processes at EPA and especially at DPR have moved us closer to that future. Many of these improvements are linked to the persistent work of CASQA and partners to educate regulators on how previous process deficiencies did not adequately address urban pesticide problems.

As detailed below, at the State level, significant progress has been made by DPR and the Water Boards in establishing a comprehensive statewide approach to utilizing pesticide regulatory authorities to prevent pesticide toxicity in urban water bodies. Overall, DPR has a system in place that is reasonably effective at addressing pesticide toxicity in urban water bodies, although improvement is needed to better coordinate this process with the requirements of the Clean Water Act and NPDES MS4 permits. DPR and the Water Board, along with CASQA and other stakeholders, are working diligently to strengthen this system and to institutionalize it. The goal is to embody this process in the State's UPAs and the Management Agency Agreement (MAA) between DPR and the State Water Board.

At the Federal level, OPP has implemented some improvements in how it evaluates and responds to water quality problems associated with pesticides, but it does not yet do this reliably and does not have a system in place to ensure that this will happen consistently and adequately. Meanwhile, scientific studies are being conducted by USGS and EPA's Office of Research and Development to better understand the complexities of pollution in urban stormwater.

Effective regulation of pesticides by EPA is still an important goal for CASQA.²⁰ Although the recent regulatory climate at federal agencies was not favorable for additional improvements in pesticide regulations, CASQA expects OPP to be more receptive in the near-term. Therefore, CASQA will resume efforts to share scientific information and stormwater expertise. However, chronic under-staffing at OPP may hamper these efforts to some degree.

As a result, CASQA has decided for the time being to limit its efforts to affect long-term systemic change by EPA and other federal agencies. Instead, CASQA has focused more on solidifying advances made at the state level, which will leverage the considerable authority held by the State of California for regulating the use of pesticides.

2.2.1 Focus on MAA Between DPR and State Water Board

In mid-2019, DPR and the State Water Board received approval to sign a major update to their formal MAA that memorializes their existing systems and growing cooperation and lays out the steps they are taking toward a "unified and cooperative program to protect water quality related to the use of pesticides." The two agencies agree "to work cooperatively to address the discharge of pesticides that may cause or contribute to surface water or groundwater pollution, including surface water toxicity."

For example, DPR will evaluate surface water quality risks and consider these risks when making registration decisions; promote environmentally sound pest management; and respond to water quality concerns that pose significant adverse effects to aquatic organisms. Meanwhile, Water Boards will confer with DPR when developing regulatory programs related to pesticides; ensure waters are monitored (in coordination with DPR's monitoring and including permittee and State

²⁰ Long-term regulatory goals at the state and federal level are described in detail in Section 1.2.

Water Board's own monitoring participation); and require and support use of best management practices relating to pesticides (structural management practices are not intended to be required in urban areas).

The Implementation Plan that accompanies the MAA describes opportunities for coordination and mutual enrichment (including cross-training), expectations for both staff and executive level communication (including an annual management-level meeting between the agencies), and current agency organization and interactions.

In the context of meetings on the UPA, CASQA has requested that the State Water Board be more active in its implementation of the MAA, in particular by providing resources and leadership in identifying water quality issues for urban use pesticides where action by DPR would be important.

2.2.2 Focus on California's UPA

At the urging of CASQA, in 2014 the State Water Board made a strategically important decision to institutionalize its commitment to work closely with DPR and EPA to utilize pesticide regulatory authority as the primary mechanism for preventing and responding to impairments of receiving waters linked to current use pesticides in urban runoff. To accomplish this goal, the State Water Board established an urban pesticides reduction project (now titled the Urban Pesticides Amendments or UPAs) as a top priority project under the comprehensive stormwater strategy it adopted in December 2015, known as "Strategy to Optimize Resource Management of Storm Water" or STORMS.²¹ The State Water Board continues to work towards developing the Urban Pesticides Amendments which will be incorporated into the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries, and the Water Quality Control Plan for Ocean Waters of California. It is important to note that a critical factor in the State Water Board's decision to move in this direction was DPR's demonstrated commitment and significant progress in addressing urban water quality issues caused by pesticides.²²



CASQA representatives have been participating actively in the development of the Urban Pesticide Amendments since their inception, to ensure that they are consistent with CASQA's vision for pesticide control.²³ The key elements CASQA is advocating for are listed below.

- Element 1: Establishment of a framework for the Water Boards to work with DPR and EPA to utilize pesticide regulatory authority as the primary means for addressing pesticides in urban runoff.
- Element 2: Adoption of a program of implementation addressing urban pesticides water pollution that integrates a feasible compliance pathway for MS4s.
- Element 3: An MS4 Monitoring program designed to coordinate with existing DPR and State Water Board pesticides and toxicity monitoring to support effective implementation of Elements 1 and 2.

²¹ STORMS' overall mission is to "lead the evolution of storm water management in California by advancing the perspective that storm water is a valuable resource, supporting policies for collaborative watershed-level storm water management and pollution prevention, removing obstacles to funding, developing resources, and integrating regulatory and non-regulatory interests." (http://www.waterboards.ca.gov/water_issues/programs/stormwater/storms/)

²² As reported in previous CASQA Pesticide Annual Reports, DPR's accomplishments include improved modeling, active ingredient screening for urban water quality issues, monitoring, and regulatory mitigation of pyrethroids and fipronil.

²³ These elements have been adapted from the CASQA document, "End Goals for Pesticide Regulatory Activities," 2014. Element 3 is directly tied to Elements 2, 4, and 5 of that document.

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- ◆ Element 4: Requirements for MS4s to support Elements 1 and 3 by contributing expertise on how pollutants present in urban environments enter and behave in urban runoff and water bodies.
- ◆ Element 5: Other actions that can reasonably be implemented by MS4s, such as IPM outreach, in support of pesticides reductions.

Elements 1-4 are consistent with CASQA Vision Action 1.2. Water Board staff have indicated their intent that the Urban Pesticides Amendments should also establish a consistent set of “*minimum pesticides source control measures for MS4 dischargers*” (Element 5).

CASQA representatives have worked with the Water Boards to ensure that such requirements are reasonable and consistent with similar measures already in place in some regions. At this time, the list of potential minimum measures includes use of IPM, education of and outreach to residents and professional pesticide applicators, providing urban runoff scientific and management expertise to support pesticide regulatory processes, non-stormwater discharge prohibitions, and pesticide and toxicity monitoring.

CASQA supports the stated goal to “create a comprehensive, coordinated statewide monitoring framework for pesticides and toxicity in urban runoff and receiving water that improves resource efficiency, usefulness of data, and coordination of data collection to support management decisions.”²⁴ A well-designed and managed monitoring framework that is properly representative of urban areas can simultaneously provide more useful information and improve the utilization of resources by eliminating unnecessary MS4 monitoring requirements that do not contribute to effective management of pesticides and pesticide-caused toxicity.

Monitoring. Previously an agreement was reached regarding decision-making channels and membership for a statewide coordinated monitoring program. However, progress in this direction has been slowed this year by changes in staffing at the State Water Board, by complications caused by COVID-19, and by reconsideration by the Water Boards of the structure and function of coordinated monitoring.

Technical Support. CASQA continues to provide technical support to the Water Boards on numerous crucial and highly detailed items related to the UPA, Staff Report, CEQA Document, monitoring program, model permit language, and the relationship of these to the MAA. CASQA organized a meeting of DPR, Water Board, and CASQA representatives on July 24, 2020. The goal of the meeting was for DPR to provide details to senior Water Board management on DPR’s capacity and progress for addressing urban pesticide issues. The outcome was educational for all stakeholders, further advancing regulatory collaboration and solutions necessary for the UPAs. Brief updates were provided by the State Water Board to CASQA via online meetings on December 9, 2020 and April 8, 2021, with additional various individual discussions between Water Board staff and CASQA.

²⁴ Informational Document, CEQA Public Scoping Meeting, State Water Resources Control Board, January 25, 2017

2.2.3 CASQA Participation in Other State Efforts

As presented in Table 4, CASQA has been actively involved with various State agencies and advisory groups that affect pesticide use and pest management in urban areas.

Table 4. Participation in Other State Efforts to Support CASQA's Goals

Agency or Conference	Latest Outcomes
DPR's Pest Management Advisory Committee (PMAC)	<p>Participation on the PMAC has resulted in expanded focus by DPR on urban pest management and water quality issues and generated funding for urban IPM research and implementation programs. However, only two Pest Management Alliance grant proposals addressing urban pesticide use were submitted this year, and PMAC did not recommend funding for either of those. Two research proposal addressed urban pesticides. The project researching improved bait for German cockroaches was selected for funding. The other project, researching ground squirrel control, was not selected for funding.</p>
California Structural Pest Control Board (SPCB)	<p>A TSC member was an appointed member of the SPCB through May 2021. The SPCB recognizes the potential for excessive pesticide application to impact water quality. The SPCB is in the process of adopting regulations to increase continuing education hours required in the IPM category. Finalization of these regulations has been slowed due to the need for California to reconcile its structural licensing requirements with newly adopted Federal regulations for this industry.</p> <p>The SPCB continues to collect funding for its Research Fund, but elected not to solicit proposals this year since the amount of funding available was not yet sufficient.</p>
DPR's Pesticide Registration Evaluation Committee (PREC)	<p>A TSC member was selected by the SPCB to serve as its representative on the PREC. The PREC membership includes public agency representatives, and is intended to advise DPR on issues related to pesticide registration. The representative requested discussion by PREC of issues related to urban issues, as listed below:</p> <ul style="list-style-type: none"> • Need for additional transparency and timely access to DPR scientific evaluations that form the scientific basis for regulatory decisions; • Need to make notices for Materials Entering Evaluation more transparent and informative; • Update on plans to mitigate imidacloprid. <p>Although the issues were not agendized, the representative met with DPR management to discuss them.</p>

Section 3. CASQA's Approach Looking Ahead

At any given time, EPA and DPR may be in the process of evaluating and registering various pesticides for urban use. CASQA will continue to track and engage in EPA and DPR activities, with a focus on top priority active ingredients (as identified in the annual Pesticide Watch List) and sharing relevant urban runoff information and CASQA's water-quality specific expertise with pesticides regulators. Key documents to be reviewed will include risk assessments and risk management proposals with an eye toward ensuring that pesticide regulators have and consider accurate information on relevant factors in urban areas such as pesticide use patterns, urban pollutant transport mechanisms, and receiving water conditions. CASQA strives to ensure that pesticide regulators have access to relevant information such as monitoring data, water quality regulatory requirements, and urban runoff agency compliance liabilities and cost information. As necessary, CASQA will continue to recommend changes in an individual pesticide's allowable uses or use instructions, request consideration of impacts on water bodies receiving urban runoff, and/or ask that regulators fill critical data gaps by obtaining more data from manufacturers. As resources allow and circumstances warrant, CASQA will continue to collaborate with wastewater organizations (such as BACWA), other water quality stakeholders, and the Water Boards in commenting on EPA and DPR actions.

In the coming year, CASQA will continue to address near-term pesticide concerns and seek long-term regulatory change. Although changes at the federal level are important for fully achieving CASQA's goal of protecting water quality through the effective use of pesticide regulations, until there is a more favorable situation at that level, we will continue to focus our efforts on solidifying progress at the state level. In the coming year, CASQA will continue engagement on specific regulatory actions for priority pesticides at the federal level, while continuing the strategic focus on supporting State adoption of the UPAs. CASQA's current priority activities are as follows:

- (1) Continue collaboration with DPR to address near-term regulatory concerns, while seeking OPP and OW actions to reduce inconsistencies:
 - 💧 Ensure DPR action on fipronil water pollution is completed, including effective professional user education about restrictions on its outdoor urban use.
 - 💧 Ensure DPR enforces mitigation measures for pyrethroids and fipronil, and adopts additional measures as necessary.
 - 💧 Ensure the state continues to conduct surveillance monitoring to evaluate pyrethroids and fipronil mitigation effectiveness and to evaluate occurrence of new threats like imidacloprid and other neonicotinoid insecticides.
 - 💧 Continue to encourage EPA to complete scientific groundwork and to identify and implement pyrethroids, fipronil, malathion, and imidacloprid mitigation measures, recognizing that it is likely that necessary mitigation cannot readily be implemented entirely by DPR.
- (2) Seek long-term changes in the pesticide regulatory structure:
 - 💧 Leverage our success at the state level and continue to be a key stakeholder in the STORMS project to adopt the statewide UPA. Through this process, CASQA will work with other stakeholders to implement the planned restructuring of California's urban surface water pesticides monitoring to increase its effectiveness and improve coordination.
 - 💧 Encourage and assist the Water Board to actively implement its MAA with DPR and take a stronger leadership role in preventing and mitigating pesticide impairments through more effective pesticide regulation at the state and federal level.
 - 💧 Seek procedure changes such that DPR continues to refine its registration procedures to address remaining gaps in water quality protection.
 - 💧 Seek increased transparency of DPR regulatory activities, including timely access to scientific evaluation reports that are the basis of registration decisions.

CASQA will continue to seek opportunities to coordinate on high priority regulatory actions, with the Water Boards and other water quality stakeholders such as POTWs and non-profits, to take advantage of efficiencies, increase effectiveness, and ensure that the water quality community has a consistent message. Table 5 presents CASQA's activities anticipated for the coming year; CASQA will conduct these activities as priorities indicate and resources allow. Table 6 summarizes upcoming regulatory action items that are likely to proceed and may require CASQA attention in the coming year.

Table 5. CASQA Pesticide Activities

Activity	Purpose	
Regulatory Tracking	Track Federal Register notices	Identify regulatory actions for high priority active ingredients that may require review.
	Track DPR notices of registration applications and decisions	Identify pesticides meriting surface water review that are not within DPR's automatic routing procedures, identify gaps or potential urban runoff-related problems with current DPR evaluation or registration plans other regulations, procedures, and policies.
	Track activities at the Water Boards	Identify opportunities for improvements in TMDLs, Basin Plan Amendments, and permits.
	Review regulatory actions, guidance documents, and work plans	Identify potential urban runoff-related problems with current EPA evaluation or registration plans, other regulations, procedures, and policies.
Regulatory Communications	Briefing phone calls, informal in-person meetings, teleconference meetings, and emails with EPA and DPR	Information sharing about immediate issues or ongoing efforts; educate EPA and DPR about issues confronting water quality community. Provide early communication on upcoming proceedings that help reduce the need for time-intensive letters.
	Convene formal meetings, write letters, and track responses to letters	Ensure current pesticide evaluation or registration process accurately addresses urban runoff and urban pesticide use and management contexts. Take advantage of opportunities to formally provide information and suggest more robust approaches that could be used in future regulatory processes. Request and maintain communication on mitigation actions addressing highest priority pesticides.
Advisory	Serve on EPA, DPR, and Water Board policy and scientific advisory committees	Provide information and identify data needs and collaboration opportunities toward development of constructive approaches for managing pesticides.
Educational	Presentations to and informal discussions with EPA, DPR, Water Board, CASQA members,	Educate EPA, DPR, Water Board, and CASQA members about the urban runoff-related shortcomings of existing pesticide regulatory process, educational efforts to support process improvements, and report on achievements. Encourage research and monitoring programs to address urban runoff data needs and priorities. Stimulate academic, government, or private development of analytical and toxicity identification methods to address anticipated urban runoff monitoring needs. Inform development of new pesticides by manufacturers and selection of pesticides by professional users.
	Develop and deliver public testimony	Educate Water Board members about the problems with existing pesticide regulatory process, encourage change, and report on achievements.

Activity		Purpose
Monitoring and Science	Update Pesticide Watch List based on new scientific and regulatory information	The Pesticide Watch List (Table 2) serves as a management tool to prioritize and track pesticides used outdoors in urban areas.
	Data analysis of DPR/SWAMP/USGS/MS4 monitoring, pesticide use data, and information from scientific literature	Summarize data to educate CASQA members and water quality community, Water Boards, DPR, and EPA.
Reporting	Prepare Monthly Action Plans	Coordinate CASQA's regulatory actions with Partners
	Prepare Annual Report to describe the year's status and progress, provide detail on stakeholder actions, and the context of prior actions as well as anticipated end goal of these activities.	Provide CASQA's members with focused information on its efforts to prevent pesticide pollution in urban waterways. The document serves annual compliance submittal for both Phase I and Phase II MS4s. It may also be used as an element of PEAIPIs and future effectiveness assessment annual reporting.

Table 6. Anticipated Opportunities for Pesticides Regulatory Engagement (July 2021 – June 2022)

EPA Pesticide Registration Review (15-year cycle)
<p>Environmental Risk Assessments</p> <ul style="list-style-type: none"> Priority 2-4 pesticides: ADBAC family, Chlorinated isocyanurates, Chlorothalonil, Copper 8-quinolinolate, Dacthal (DCPA), Dicamba, DDAC family, N-bromosulfamates, PCNB, Silver, Tebuconazole, others (schedule unknown)
<p>Endangered Species Act Evaluations</p> <ul style="list-style-type: none"> Priority 1 pesticides: Imidacloprid (Biological Evaluation (BE)) Priority 2 pesticides: Clothianidin (BE), Cuprous iodide (ESA Final Effects Determination), Thiamethoxam (BE)
<p>Proposed Interim Decisions</p> <ul style="list-style-type: none"> Priority 1 pesticides: Etofenprox, Fipronil, Malathion, Pyrethroids: Permethrin Priority 2-4 pesticides: 2,4-D, Carbaryl, Chlorine Dioxide, Dichlorvos (DDVP), Diuron, Isothiazolinones (DCOIT, BIT, BBIT, MIT, OIT), MGK-264 (synergist), Mancozeb, Naled, o-Phenyl phenol, Oxadiazon, Oxyfluorfen, Peroxy Compounds (includes Peroxyoctanoic Acid; Sodium Percarbonate), Piperonyl butoxide (PBO) (pyrethroids synergist), Potassium Peroxymonosulfate and Potassium Peroxymonosulfate Sulfate, Propiconazole, Pyrethrins, Sodium pyrithione, Thiophanate methyl, Ziram, others (schedule unknown)

Other EPA-related Items

- “Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process” affects how the EPA uses cost and benefit analysis in setting pollution standards. Rule proposal was expected in 5/19.
- Proposed rule to eliminate some OPP Federal Register Notices (was anticipated September 2018 according to EPA semi-annual regulatory agenda)
- EPA’s Update to Guidelines for Deriving Aquatic Life Water Quality Criteria. Draft scoping document external peer review is next step. Seeking OPP engagement.

DPR New Pesticide Product Registration Decisions

- Proposed new urban pyrethroids (momfluorothrin, alpha-cypermethrin, phenothrin and transfluthrin products)
- Proposed expansion of bifenthrin use in non-residential urban locations (including a bifenthrin-novaluron-pyriproxyfen product)
- Proposed new fipronil products: fipronil-bifenthrin landscaping product, termite product, product for yellow jackets
- Proposed new aerated indoxacarb powder
- Others (schedule unknown)

Other DPR-related Items

- Registration Application Surface Water Reviews – continue to follow up on communications requesting review of all storm drain products and outdoor antimicrobials

Water Boards

- STORMS Urban Pesticides Amendments
- Pesticides 303(d) listings
- Pesticide TMDL implementation requirements for permittees

Other Statewide Items

- [California Department of Food & Agriculture Program EIR on invasive species](#) control covering potential broadcast pesticide applications urban areas of multiple priority pesticides. In litigation (California Court of Appeal).

Appendix

Regulatory Participation Outcomes and Effectiveness Assessment Summary Tables

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Chlorine Gas (February 2021)

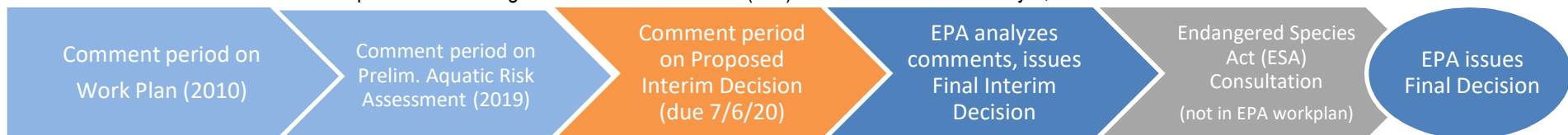
Cypermethrins (June 2021)

Halohydrantoin (February 2021)

Pyrethroids (June 2021)

Terbutylazine (August 2020)

Pesticide: Chlorine Gas; EPA-HQ-OPP-2010-0242
Use: Swimming pools, spas, and hot tubs.
Why we care: Toxic to aquatic invertebrates.
Actions taken: CASQA has been monitoring updates on the EPA docket.
Status: EPA released the Proposed Interim Registration Review Decision (PID). Comments were due July 6, 2020. EPA issued a Final Interim Decision in Oct. 2020.



Next steps: ESA Consultation is required but unlikely to begin before 2022.
Recommendation: Write a response letter, supporting the Sacramento County comments that EPA included in the Proposed Interim Decision.

CASQA comments to EPA (July 6, 2020):	EPA Response:	Did EPA incorporate member comments?
<p>CASQA recommends that the label language be updated to match the language for copper products, which would also provide consistent label language across pool, spa, and hot tub chemicals: <i>"Before draining a treated [pool,] [spa,] [hot tub,] or [fountain] contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool or spa water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities."</i></p>	<p>EPA adopted the following language for all products used to treat commercial and residential pools and fountains: <i>"Before draining a treated [pool] or [fountain], contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated [pool] or [fountain] water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities."</i></p>	<p>Yes.</p>

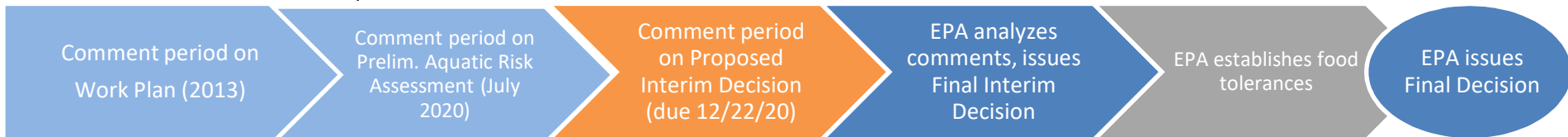
Pesticide: Cypermethrins – EPA-HQ-OPP-2012-0167
Use: Insecticide
Why we care: Priority pesticide due to toxicity, use, and monitoring data. Pyrethroids have multiple 303(d) listings and TMDLs.
Actions taken: CASQA commented on the Preliminary Ecological Risk Assessment for Pyrethroids in 2017, the Ecological Risk Mitigation Proposal (February 2020), and the Cypermethrins Proposed Interim Decision (Nov 2020)
Status: EPA released the Final Interim Registration Review Decision (ID) (April 2021)

Next steps: ESA Consultation is required but unlikely to begin before 2022.
Recommendation: No action is needed at this time as there is no opportunity for public comment.

CASQA Comments to EPA (November 2020)	EPA Response	Did EPA incorporate CASQA's comment?
<p>The Cypermethrins PID does not provide any additional mitigation measures, beyond those found in the RMP, to address the documented impacts of pyrethroid use in urban (nonagricultural) areas, and the risks to aquatic life of continued use of pyrethroid pesticides. This is despite significant evidence presented both in EPA's risk assessments and in our previous comment letters, clearly demonstrating that pyrethroid insecticides as a class, including cypermethrins, continue to cause toxicity in urban waterways.</p>	<p>"EPA has considered these comments and has decided not to develop unique chemical-specific risk mitigation for the cypermethrins at this time beyond what is already required as part of this ID. EPA concludes that the cypermethrins provide high benefits for controlling pests in indoor residential areas, outdoor urban areas, and in agricultural crop production. The Agency is requiring risk mitigation primarily to address risk to non-target invertebrates and fish; however, risks may remain to non-target organisms even after mitigation. Any remaining risks are outweighed by the benefits of the cypermethrins use. In addition, EPA notes that all states, including California, are authorized to restrict pesticide use according to state requirements/standards. For a more detailed response to submitted water quality comments, please see the Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals (September 30, 2020)." (ID, p.15)</p>	<p>No.</p>

<p>CASQA recommends the following enhancements to the proposed label language specified in Appendix B of the MRP:</p> <ul style="list-style-type: none"> • Design a clear schematic graphic for product labels to completely and effectively address products that may be dumped or washed into gutters and storm drains; • Review proposed label language text, and edit as needed to provide clear and consistent descriptions of pervious and impervious surfaces, to ensure clarity with respect to allowable exceptions, including with respect to applications to vertical surfaces; and • Provide California-specific labels for outdoor structural pest control pyrethroids products that are completely consistent with California Surface Water Protection Regulations implemented by California Department of Pesticide Regulation. 	<p>“As discussed in the Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals (September 30, 2020), EPA revised the label language to include an image of a required pictogram and added clarity to various statements on the pyrethroid labels. The substance and intent of the statements, however, have not changed. The label language changes are reflected in Appendix B.” (ID, p.15)</p>	<p>No. (The label language and pictogram EPA refers to is one suggested by BACWA of a diagonal strikethrough over a drain for indoor uses.)</p>
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Pesticide: Halohydantoins; EPA-HQ-OPP-2013-0220
Use: Swimming pool, spa, hot tubs, and fountain disinfectant.
Why we care: Degradants are toxic to aquatic organisms.
Actions taken: CASQA sent EPA a comment letter on the Preliminary Risk Assessment on July 6, 2020.
Status: EPA released the Proposed Interim Decision in October 2020. Comments were due December 22, 2020.



Next steps: EPA will issue a Final Interim Decision
Recommendation: Submit a letter to thank EPA for incorporating proposed label language.

CASQA comments to EPA (July 6, 2020):	EPA Response:	Did EPA incorporate member comments?
<p>CASQA Requests Revised Labeling as a Mitigation Measure- CASQA requests that the current halohydantoins label language for any pool, spa, hot tub, and fountain products be changed to match the lithium hypochlorite and copper compounds labels, which would also provide consistent label language across pool, spa, hot tub, and fountain chemicals.</p> <p><i>“Before draining a treated pool, spa, hot tub, or fountain, contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool or spa water to any location that flows to a gutter or storm drain or natural water body unless discharge is allowed by state and local authorities.”</i></p>	<p>EPA included the revised language in its proposed labeling changes:</p> <p><i>“Before draining a treated [pool], [spa], [hot tub], or [fountain], contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated [pool], [spa], [hot tub], or [fountain] water to any location that flows to a gutter or storm drain or natural water body unless discharge is allowed by state and local authorities.”</i></p>	<p>Yes.</p>
<p>For all swimming pool, spa, hot tub, and fountain products, including those containing halohydantoins, we also recommend that the “Environmental Hazards” label statements be applied on the basis of product end use rather than product size. This would mimic EPA’s decision for lithium hypochlorite and copper products. As explained in our attached lithium hypochlorite comments, this approach avoids potential conflicting language on product labels.</p>	<p>None.</p>	<p>No.</p>

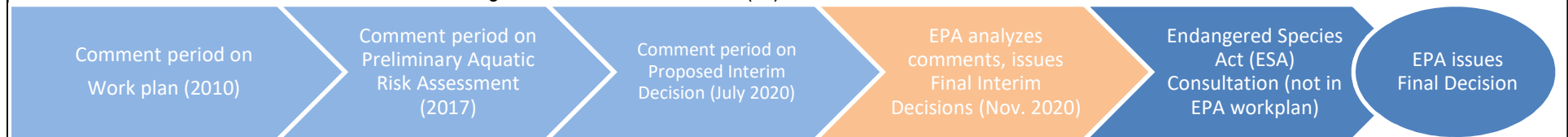
Pesticide: Bifenthrin – EPA-HQ-OPP-2010-0384, Cyfluthrins – EPA-HQ-OPP-2010-0684, Cypermethrins – EPA-HQ-OPP-2012-0167, Cyphenothrin – EPA-HQ-OPP-2009-0842, d-Phenothrin – EPA-HQ-OPP-2011-0539, Deltamethrin – EPA-HQ-OPP-2009-0637, Esfenvalerate – EPA-HQ-OPP-2009-0301, Etofenprox – EPA-HQ-OPP-2007-0804, Fenpropathrin – EPA-HQ-OPP-2010-0422, Flumethrin – EPA-HQ-OPP-2016-0031, Gamma-cyhalothrin – EPA-HQ-OPP-2010-0479, Imiprothrin – EPA-HQ-OPP-2011-0692, Lambda-cyhalothrin – EPA-HQ-OPP-2010-0480, Momfluorothrin – EPA-HQ-OPP-2015-0752, Permethrin – EPA-HQ-OPP-2011-0039, Prallethrin – EPA-HQ-OPP-2011-1009, Tau-fluvalinate – EPA-HQ-OPP-2010-0915, Tefluthrin – EPA-HQ-OPP-2012-0501, Tetramethrin – EPA-HQ-OPP-2011-0907

Use: Insecticides

Why we care: Priority pesticide due to toxicity, use, and monitoring data. Multiple 303(d) listings and TMDLs.

Actions taken: CASQA commented on the Preliminary Ecological Risk Assessment for Pyrethroids in 2017, the Ecological Risk Mitigation Proposal (February 2020), and the Bifenthrin Proposed Interim Decision (July 2020).

Status: EPA released the Final Interim Registration Review Decision (ID).



Next steps: ESA Consultation is required but unlikely to begin before 2022.

Recommendation: No action is needed at this time as there is no opportunity for public comment.

CASQA Comments to EPA: General (02/12/2020) and Bifenthrin (07/06/2020)	EPA Response	Did EPA incorporate CASQA's comment?
EPA's risk / benefit finding should be revised to differentiate among the 23 pyrethroids and pyrethrins and among the various outdoor urban uses of the 23 chemicals	"The pyrethroids have many uses across agricultural, residential, commercial, indoor and outdoor sites, and were grouped into broad categories to compare the potential exposure for those active ingredients that were not quantitatively assessed in the 2016 Ecological Risk Assessment. The ecological risk assessment grouped uses into four major categories: indoor uses, outdoor non-agricultural uses, outdoor agricultural uses and wide-area mosquito adulticide uses. For the purposes of risk-benefit analysis, and EPA considers this approach to provide adequate differentiation among uses assessed for the group of 23 chemicals. Among outdoor uses, EPA is aware of	No.

	<p>the potential for applications to impervious surfaces to contribute to waterway pollution. The Agency's mitigation for outdoor non-agricultural use as a category is reflective of those risk contributions. The Agency disagrees that a separate analysis of each pyrethroid or each specific use is needed to support EPA's risk assessment and risk management conclusions and disagrees that a representative analysis featuring bifenthrin is necessary, as bifenthrin is not outstanding among pyrethroids in terms of RQ exceedances, aquatic invertebrate toxicity, or environmental persistence.</p> <p>EPA's risk assessment supports the conclusions that there are risks of concern for aquatic organisms from exposure to pyrethroids, which is supported by water monitoring data that indicate that pyrethroids are present in the environment that result in adverse effects to aquatic invertebrates. The benefits from the use of these chemicals for these uses is also very high. For further discussion on ecological risk assessment, see EPA's Joint Response from OPP's Environmental Fate and Effects Division and Pesticide Re-evaluation Division to Comments on the Preliminary Risk Assessments for Pyrethroids and Pyrethrins Insecticides. For more discussion on usage, alternatives, benefits and impacts conducted for the outdoor and indoor uses of the pyrethroids group, see the Usage Characterization and Alternatives Summary for Synthetic Pyrethroids Used in Residential Lawns and Outdoor Vegetative Spot Treatments and the Qualitative Overview of Alternatives for Selected Use Patterns of Pyrethroids Being Assessed for a Down-the-Drain Risk Assessment, available in the pyrethroids special docket (EPA-HQOPP-2008-0331). (Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and</p>	
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	<p>Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals, p. 33)</p> <p>“The Agency appreciates the comments from NACWA, CASQA, SFBWQCB, and BACWA. EPA has considered these comments and has decided not to develop unique chemical-specific risk mitigation for bifenthrin at this time beyond what is already required as part of this ID.” (Bifenthrin Interim Registration Review Decision Case Number 7402, September 2020, p.14)</p>	
<p>EPA should end outdoor urban use of bifenthrin: Therefore, due to the widely documented impacts of bifenthrin use to aquatic life and the consequent costs to municipal agencies, CASQA urges EPA to take specific action to end registration of bifenthrin for outdoor urban (nonagricultural) uses. Our previous letter provides additional detail, so we summarize the reasons for our request here:</p> <ul style="list-style-type: none"> • Monitoring and usage data clearly show that replacing bifenthrin with another pyrethroid would reduce water pollution.³ • There are more than a dozen alternative pesticides available to serve the same purposes served by bifenthrin outdoors, including other pyrethroids, pyrethrins, and newer chemistries like indoxacarb. • Less toxic pest control methods based on integrated pest management (IPM), such as use of containerized baits and sealants have proven highly successful in urban environments. • In light of available alternatives, outdoor urban bifenthrin use does not appear to have benefits that outweigh its environmental impacts and economic costs to municipalities. <p>If EPA does not end all outdoor urban (non-agricultural) uses of bifenthrin, we request that EPA implement measures to make existing</p>	<p>“EPA concludes that bifenthrin provides high benefits for controlling pests in indoor residential areas, outdoor urban areas, in agricultural crop production, and as an adult mosquitocide to control vectors for human disease. The Agency is requiring risk mitigation primarily to address risk to non-target invertebrates and fish; however, risks may remain to non-target organisms even after mitigation. Any remaining risks are outweighed by the benefits of bifenthrin use.” (Bifenthrin Interim Registration Review Decision Case Number 7402, September 2020, p.14)</p>	<p>No.</p>

<p>label restrictions more effective. The following measures would support increased adherence to these label instructions:</p> <ul style="list-style-type: none"> • Make the existing bifenthrin special restrictions more prominent. • Require bifenthrin registrants to conduct aggressive outreach and education to professional structural pest control applicators, aimed at ensuring that all applicators strictly comply with the label. • Provide California-specific labels for outdoor structural pest control products that are completely consistent with California Surface Water Protection Regulations. This will reduce the chance of confusion among end users and will provide a key mechanism in support of California’s more restrictive requirements, which are designed to prevent water pollution caused by bifenthrin and other pyrethroids. 		
<p>EPA should provide California-specific labels for outdoor structural pest control products that are consistent with California regulations</p>	<p>“EPA notes that all states, including California, are authorized to restrict pesticide use according to state requirements/needs.” (Bifenthrin Interim Registration Review Decision Case Number 7402, September 2020, p.14)</p>	<p>No.</p>
<p>CASQA supports EPA-proposed label changes, with modifications.</p> <p><u>CASQA supports these other proposed label changes:</u></p> <ul style="list-style-type: none"> • Prohibition on applications during rain • Advisory statement to avoid applications if rain is forecast within 24 hours (We would prefer an enforceable statement) • Addition of water protection statements • Definition of spot treatment (2 sq. ft.) • Requirement that product labels explicitly state whether particular products are allowed to be used indoors only, outdoors only, or both indoors and outdoors • Reduction in height above ground level of building treatments from 3 feet to 2 feet <p>To ensure that these label elements completely and effectively address products that may be dumped or washed into gutters and storm drains, we request that EPA modify the “label table” in Appendix B to:</p>	<p>“Regarding the suggestion...to add the down-the-drain advisory statements to all pyrethroids/pyrethins labels (both agricultural and non-agricultural), outdoor and agricultural product labels already have label statements to prevent these chemicals from reaching drainage systems. In contrast, products with indoor uses do not currently have this language. Therefore, EPA has determined that these down-the-drain advisory statements are only necessary on products with indoor uses. However, registrants have the option to consider including this language (i.e., “unless for use in pipes and sinks”) to agricultural product labels at their discretion. EPA recognizes that Spanish labeling may increase the size of residential labels, however the Agency determined that providing this advisory information in Spanish would inform more users that products should not be</p>	<p>No.</p>

1. Identify a specific outdoor drain graphic and require the same graphic be used on all products.

2. Establish minimum size for the outdoor graphic, to ensure that it is legible, i.e., no smaller than 1.5 square centimeters unless this size is greater than 10% of the size of the label.

3. Modify the list of products that must include the graphic, stewardship language, and Spanish translations to specify:

a. The graphic, stewardship language, and Spanish are required on all categories of products -**importantly including all outdoor non-agricultural products** – not just those labeled for indoor residential use as indicated in the header on the label table in Appendix B.

- At a minimum, the label table should be revised to indicate the graphic must be placed on all products labeled for outdoor use as well as those labeled indoor use in nonagricultural settings (as indicated in the text on page 39). We would prefer that the graphic be required on all products, as even agricultural and mosquito abatement products are often mixed at facilities served by a storm drain system.

b. The graphic, stewardship language, and Spanish are required on all types of products (except pet shampoos) that are packaged in a form that could be discharged into a drain (i.e., anything other than an impregnated material like a collar or fly strip).

- The graphic should not be placed on pet shampoo product labels, to avoid inadvertently implying that pet wash water should not be discharged to the sewer. The primary discharge alternative – outdoors, would likely direct wash water to storm drains where it could flow untreated to creeks.

c. The graphic, stewardship language, and Spanish are required for all 23 pyrethroids and pyrethrins (not just the subset listed in the left column of the label table in Appendix B), recognizing that all pyrethroids have potential to enter gutters and storm drains.

- The subset of the 23 chemicals identified for this requirement in Appendix omits pyrethroids (e.g., momfluorothrin) that could also enter gutters and storm drains from outdoor use.

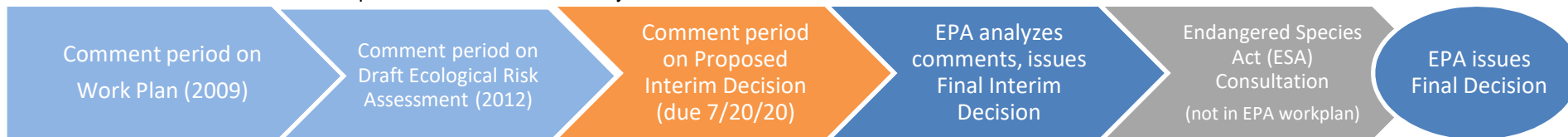
d. A Spanish translation is required for the outdoor drain discharge prohibition (“Do not allow the product to enter any drain during or after application.”)

disposed of down the drain, unless they are specifically labelled for that use.” (Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals, p. 7)

Yes, the EPA agreed to this suggestion to better clarify if pesticide is used indoors or outdoors. The label correction shows up in the appendices of the Revised Ecological Risk Mitigation as well as the bifenthrin and permethrin PIDs. (Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals, p. 43)

<p>The Pyrethroids PIDs do not provide any additional mitigation measures to address the documented impacts of pyrethroid use in urban (non-agricultural) areas, and the risks to aquatic life of continued use of pyrethroid pesticides, despite significant evidence presented both in EPA's risk assessments and in our previous comment letters clearly demonstrating that pyrethroid insecticides as a class continue to cause toxicity in urban waterways.</p>	<p>EPA did not include additional mitigation.</p>	<p>No.</p>
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Pesticide: Terbutylazine; EPA-HQ-OPP-2010-0453
Use: Fountain algaecide/microbiocide/microbiostat.
Why we care: Highly toxic to aquatic invertebrates.
Actions taken: County of Sacramento (a CASQA member) sent EPA comments on the Draft Risk Assessment in January 2020, respectively.
Status: EPA released the Proposed Interim Decision in May 2020.



Next steps: EPA will review comments on the Proposed Interim Decision and issue a Final Interim Decision
Recommendation: Write a response letter, supporting the Sacramento County comments that EPA included in the Proposed Interim Decision.

Sacramento County comments to EPA (Jan. 2020):	EPA Response:	Did EPA incorporate member comments?
<p>Our primary concern with the subject pesticides is that the Draft Risk Assessment neglected to consider storm drain discharges of terbuthylazine-containing fountain water and the ensuing risk to aquatic life. The Draft Risk Assessment assumed that there would be “no significant exposure to aquatic organisms...from the decorative/ornamental fountain uses given that the label prohibits discharge of this product into lakes, streams, ponds, estuaries, oceans, or other waters, unless in accordance with the National Pollutant Discharge Eliminations Systems (NPDES) permit.”</p>	<p>EPA made label changes (see below) that will help reduce the amount of terbuthylazine that is discharged into the storm drain by requiring notification to local sanitary sewer/ storm drain authorities.</p>	<p>Yes.</p>
<p>Sacramento County requests that the current language be changed to match the copper label, which would also provide consistency for label language across pool, spa, hot tub, and fountain chemicals, which follows: “Before draining a treated pool, spa, hot tub, or fountain, contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool, spa, hot tub, or fountain water to any location that flows to a gutter or storm drain or</p>	<p>“The agency agrees with the requested label changes and is proposing additional label changes to address the potential ecological risks by reducing exposure and clarifying the appropriate use methods, as described in Appendix B.”</p>	<p>Yes.</p>

<p>natural water body unless discharge is allowed by state and local authorities.”</p>		
<p>Sacramento County also notes that the following language exists on several terbuthylazine labels: <i>“Experience will demonstrate the level of (product) is required.”</i> We are concerned that this vague label language could lead to overuse these products. We are also concerned that label language states that users should maintain a concentration of product, cited in ppm, to get adequate algae control, but does not specify a practical, low-cost method for determining terbuthylazine concentrations in treated fountain water. We respectfully request that EPA provide a dosing table, based on the size range (in volume of water) for fountains, to guide consumers in the application amount and frequency of application of the product.</p>	<p>EPA did not address this comment.</p>	<p>No.</p>
<p>For all fountain products, including those containing terbuthylazine, we also recommend that the “Environmental Hazards” label statements be applied on the basis of product end use rather than product size. This would mimic EPA’s decision for lithium hypochlorite products. As explained in our attached lithium hypochlorite comments, this approach avoids potential conflicting language on product labels.</p>	<p>EPA did not address this comment.</p>	<p>No.</p>